ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO A GUEST LECTURE

# An Introduction to modelling and reconstruction in Magnetic Particle Imaging

**Wolfgang Erb** | Dipartimento di Matematica, Università degli Studi di Padova, Italia

Chaired by Christian Pötzsche | Department of Mathematics

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## ABSTRACT

In this talk, we give a short overview about Magnetic Particle Imaging, a quite recent biomedical imaging modality in which magnetic tracer particles can be tracked by their response to an external oscillating magnetic field. The imaging equations of this modality lead to a mathematically ill-posed inverse problem. We provide an analysis of this inverse problem in different imaging scenarios and describe some possibilities on how the reconstruction can be performed in an efficient way.

**We hope to see you there!**